

1993

# The transformation to a learning organization : a case study

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**The transformation to a learning organization: A case study**

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**San Jose State University, 1993**

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THE TRANSFORMATION TO A LEARNING ORGANIZATION:  
A CASE STUDY

A Thesis  
Presented to  
The Office of Graduate Studies and Research  
San Jose State University

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science  
Systemic Learning Organizations

by  
Stephen Paul Madden  
December, 1993

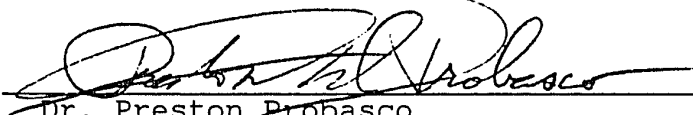
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## ABSTRACT

### THE TRANSFORMATION TO A LEARNING ORGANIZATION: A CASE STUDY

by Stephen Paul Madden

This thesis is a study of a government agency which has attempted to turn itself into a learning organization. It briefly surveys the theory of learning organization disciplines used by the agency to guide this change and describes the methodology used in this case study. The case narrative examines the background of the agency, the problems which led to its decision to attempt a transformation, the process it used, and its current situation. The study concludes that the agency has been successful in beginning the transformation by integrating the five disciplines. It looks at broader issues which affect all groups attempting to become learning organizations. Implications for this emerging learning organization's future are examined.

To My Wife,  
Inés Zapiola,  
Who Every Day Teaches Me  
How To Learn

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## CHAPTER I

### THEORY

This thesis is a case study of an agency which is attempting to become a learning organization, based on concepts raised in *The Fifth Discipline* by Peter M. Senge.<sup>1</sup> Senge outlines five disciplines that he believes create organizations which are flexible, effective, and empowering. In addition, the agency studied uses the theories of several other experts on individual and organizational effectiveness.

The first of Senge's five disciplines is **personal mastery**.<sup>2</sup> He notes that organizations can truly learn through individual learning; thus an individual's orientation towards acquiring new knowledge, skills, attitudes, and insights is vital. There are two underlying factors in personal mastery: (1) constantly clarifying what is important to a person; and (2) learning to see current reality more clearly. Individuals formulate a personal vision for themselves, which concretely defines what they

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<sup>1</sup>Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Doubleday, 1990).

<sup>2</sup>*Ibid.*, 139.

want to see through their actions: world peace, a human on the moon, or an increase in market share. Organizations choose to foster personal mastery in employees because they are more committed, learn faster, and take more initiative.

Just as individuals may have a personal vision for themselves, some organizations have a **shared vision**.<sup>3</sup> Senge defines this discipline as a common caring among a group, where each individual strongly wishes to arrive at the same destination. A learning organization *must* have a shared vision in order to compel the courage for risk-taking. Senge presents the example of the Apple MacIntosh, whose development team wished to create a computer that *anyone* could use.<sup>4</sup>

Sometimes a shared vision will emerge from an individual's personal vision. *The Fifth Discipline* tells the story of an employee at Digital Equipment Corporation who dreamed of tying the company together electronically.<sup>5</sup> He was able to convince enough of his fellow employees to adopt his vision that the company succeeded in achieving this goal despite it being a tremendous task at the time. Digital then adopted interconnectability as a significant part of its marketing and advertising strategy.

Digital could only apply company-wide networking as a

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<sup>3</sup>Ibid., 205.

<sup>4</sup>Ibid., 209.

<sup>5</sup>Ibid., 216.

competitive advantage by having learned it; the employee who championed the idea estimated that at the time he proposed his vision they had only fifteen percent of the knowledge they needed to accomplish it.<sup>6</sup> A group's rapid acquisition of skills, knowledge, and insights is another of Senge's disciplines--**team learning**.<sup>7</sup> Ordinarily, when a group of individuals is brought together on an issue many factors can hinder their productivity and effectiveness: political motivations, social identity maintenance (attempts to bolster the group's self-esteem), interpersonal animosities, lack of candor, aversion to risk-taking, petty prejudices, and hidden agendas. These are often taken for granted--it is assumed that "that's just the way groups are." Team learning seeks to go beyond this lack of direction and align participants so that they are functioning as a whole.

Senge points out that team learning has three critical dimensions. The first is the need to think insightfully about complex issues and overcome the forces noted above that detract from group intelligence. The second is the need for innovative, coordinated action; Senge uses the metaphors of sports teams and jazz ensembles whose members complement each other. Finally, there is the connection

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<sup>6</sup>Ibid.

<sup>7</sup>Ibid., 233.

with the outside. Team members are usually members of other teams where they can spread the learning and practices gained.

Practicing team learning engages the team members in two complementary ways of conversation: dialogue and discussion. As Senge notes:

In dialogue, there is the free and creative exploration of complex and subtle issues, a deep "listening" to one another and suspending of one's own views. By contrast, in discussion different views are presented and defended and there is a search for the best view to support decisions that must be made at that time.<sup>8</sup>

Dialogue is a **divergent** technique; like brainstorming it attempts to generate new ideas and be creative. Discussion is a **convergent** technique. It surveys the field of available ideas, grounds them in what is feasible, and chooses an action plan.

Both types of techniques are necessary for innovation because nothing new is created without divergence and nothing ever gets done without convergence. Most groups focus mainly on discussion and thus lose the opportunity to innovate. In addition, because discussion involves advocacy rather than inquiry, participants come to meetings prepared to defend positions rather than explore new ground. While many organizations reward and promote strong advocates, those which foster team learning recognize members who can

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<sup>8</sup>Ibid., 237.

inquire and think divergently.

The maps individuals and organizations create of the world, known as **mental models**, make up the next discipline.<sup>9</sup> A mental model can be as simple as "don't believe what you hear" to as complicated as a company's marketing strategy. Every human action is coherent with a set of mental models; indeed, mental models are often self-reinforcing. For example, a supervisor who believes a supervisee is incompetent might selectively perceive only the employee's failures rather than successes. He may even discriminate against the employee by disciplining him more harshly, thus evoking withdrawal and further evidence of incompetence.

Senge points out that it is impossible to not have mental models--thinking requires simplification--but the problem is when individuals and organizations are unaware of them. These tacit mental models can continue to influence people long after they have become invalid. He cites the example of the Big Three automakers, who believed that consumers bought cars for styling rather than quality and reliability. They held these mental models for so long that Japanese dealers were able to increase their market share from zero to thirty-eight percent.<sup>10</sup> To be effective, mental models must be constantly surfaced and tested. A

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<sup>9</sup>Ibid., 174.

<sup>10</sup>Ibid., 176.



supervisor who formulates a hypothesis about a supervisee's incompetence can test it: he may receive disconfirming evidence like the employee "never received training in that area" or "a close relative is severely ill"; conversely, the supervisor might find confirming evidence that he is indeed incompetent. By constantly checking current reality, as the discipline of personal mastery demands, the supervisor can make better decisions in the future.

Of course, in most organizational cultures the supervisor would not be able to test his mental model by going directly to the employee and asking "Why are you incompetent?" In some cultures, even discussing the actual behavior which led to the attribution of incompetence would be tacitly forbidden. The topic is an "undiscussable"--those issues which unofficial organizational rules have designated not to be talked about. Chris Argyris and his colleagues at Harvard University have examined "defensive routines," those individual and organizational behaviors which protect one from embarrassment and threat.<sup>11</sup> That some topics are undiscussable has the combined effect of protecting organizational members from these consequences and not allowing mental models to be surfaced and tested. Like mental models, undiscussables can be self-reinforcing;

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<sup>11</sup>Chris Argyris, *Overcoming Organizational Defenses: Facilitating Organizational Learning* (Boston: Allyn and Bacon, 1990), 25.

when not surfacing and testing mental models have resulted in a failure, the failure itself can become an undiscussable.

Defensive routines are one component of what Argyris calls the "organizational defensive pattern."<sup>12</sup> He has designated the normal organization meta-mental model, which is rife with defensive routines, as **Model I**. Members' behavior is influenced by the Model I governing values which are "to seek to be in unilateral control," "to win and not lose," and "to suppress negative feelings."<sup>13</sup> This results in actions which are often ineffective, yet shield the participants from negative consequences.

As a solution to the quagmire which Model I behavior creates, Argyris has devised a meta-mental model called **Model II**. The governing values of Model II are using "valid information," making "informed choice," and "responsibility to monitor how well the choice is implemented."<sup>14</sup> This means that mental models must be constantly surfaced and tested using the best verifiable information available at the time. An intervention like the supervisor who sees a supervisee's behavior as incompetent should also always be conducted so as to elicit a minimal amount of defensiveness.

It would be inappropriate for the supervisor to

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<sup>12</sup>Ibid., 63.

<sup>13</sup>Ibid., 13, 25.

<sup>14</sup>Ibid., 104.

approach the subordinate and ask, "Why are you so incompetent?" Such an approach would probably both anger the employee and confuse him about the reasons for the supervisor's attribution. A more correct Model II intervention would begin "I have observed this behavior; the requirements of the job are this other behavior. Do you agree with me that there is a mismatch?" Once they had established that a mismatch existed, the supervisor could inquire, "Help me understand why this mismatch exists."

In *The Fifth Discipline*, Senge talks about the quality of discussing what is truly on members' minds as "openness"; this means there is not a difference between what an employee says in a meeting in the morning and what he tells his friends that evening. Many organizations state that they have a policy that encourages such openness, but employees often know that broaching undiscussables would be a "career-limiting move." Argyris calls such dichotomies "espoused theories vs. theories-in-use."<sup>15</sup> They are the difference between what individuals and organizations say and what they do.

Such differences are rampant. Some collective bargaining units like labor unions have used them as a more effective negotiation tool than a strike. Employees of British Rail are able to bring the railway to a near halt

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<sup>15</sup>Ibid., 13.

without loss of wages by adopting a "working to rule" policy of following all espoused theories and ignoring the normal theory-in-use shortcuts.<sup>16</sup>

Senge's fifth discipline is **systems thinking**.<sup>17</sup> Many of the solutions applied to modern problems assume that the whole is simply the sum of the parts. Thus a problem in one part can be solved by treating or replacing that discrete part. Unfortunately, the interconnectedness of systems that are even moderately sized or complex can create solutions and/or other problems which are worse than the original problem. For example, transportation planners have found that trying to solve traffic congestion by adding lanes to freeways is ineffective; the congestion decreases, but then other drivers discover the lack of congestion and start to use the freeway. Six months after the lane is opened, the traffic is just as bad as before plus the taxpayers' money has been spent. The freeway is part of an overall, interconnected transportation system.

An effective solution to a problem must be an integrated solution. It must consider many different aspects and perspectives. For example, any attempt to reform health care in the United States would need to have contributions from medicine, pharmacology, public policy,

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<sup>16</sup>Gareth Morgan, *Images of Organization* (Newbury Park, Ca.: Sage Publications, 1986), 164.

<sup>17</sup>Senge, *The Fifth Discipline*, 6, 12.

information science, sociology, social work, risk management, and education--to name but a few. Even with an integrated approach which touches each of these disciplines, no one perfect solution can be developed. Russell Ackoff talks of replacing the idea of solving complex problems with "managing messes."<sup>18</sup> Senge drives this point home by quoting biologist and essayist Lewis Thomas:

When you are dealing with a complex social system, such as an urban center or a hamster, with things about it that you are dissatisfied with and eager to fix, you cannot just step in and set about fixing with much hope of helping. This realization is one of the sore discouragements of our century.<sup>19</sup>

In a learning organization, systems thinking provides an integrated approach for applying the other four disciplines. One common learning disability from non-systemic thinking that Senge highlights is the "I am my position" fallacy.<sup>20</sup> This is exemplified by the salesperson who is assigned a territory and attempts to only maximize his sales in that area. He acts as if he is only his position and not part of a dynamic system--his organization. By doing so he may damage the company's long-term viability by not learning new, innovative products and only promoting established, easy-to-sell products. He might encourage the competing sales force to stay out of his territory and tell

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<sup>18</sup>Russell L. Ackoff, *Creating the Corporate Future* (New York: John Wiley & Sons, 1981), 79.

<sup>19</sup>Senge, *The Fifth Discipline*, 62.

<sup>20</sup>Ibid., 18.

them to focus on the neighboring territory of a co-worker. He may refuse to mentor less experienced salespeople. He would not be thinking in terms of a system larger than his territory.

The discipline of personal mastery would encourage this individual to perform at his best but to make a connection between his values at the home and office, to see beyond his petty concerns with short-term sales. Being part of a shared vision would help him look toward his company's long-term good rather than just his territory. Participating in team learning could create a greater understanding of the firm's products and provide a means for soliciting his ideas by taking advantage of his closeness to the customer. Working with his mental models, by surfacing and testing them, could make him more effective in all aspects of his job. Yet without systems thinking to integrate these disciplines and help him see beyond just the obvious demands of his job, he is stuck in his territory--both figuratively and literally.

## CHAPTER II

### METHODOLOGY

I began this case study by identifying an agency which was attempting to become a learning organization and secured its permission to conduct this study. I interviewed ten of the twelve employees of the agency over a two-day period; two declined to be interviewed. I interviewed the agency head a second time to learn his perspective as both the manager and the champion of the learning organization idea rather than as an employee. I also attended one of the agency's weekly hour-long staff meetings and read its three most recent biennial reports.

The agency has retained the services of two consultants in order to assist in their transformation to a learning organization. I interviewed them separately within one month of the original agency interviews, during which time they had no contact with the agency for consulting activities.

I asked all interviewees a set of questions about their background; the past, present, and projected future of the agency; and the agency's learning organization activities. When I believed necessary, I expanded upon the

prepared questions or followed-up with questions immediately to clarify the original answer. I asked the manager and consultants similar questions to those I asked of employees, but the questions were modified to reflect their unique perspectives.<sup>1</sup> In all cases, I used as data in this case study only tape-recorded conversations or written materials provided by the participants.

This provided a snapshot of the agency, but the twelve perspectives elicited many different and sometimes divergent viewpoints. I did not follow up to resolve differences of opinion among employees once the data had been gathered. However, I pointed out inconsistent statements within any particular interview and attempted to resolve them during the interview. Some employees' opinions were also checked out with the consultants.

In one case, an interviewee indicated that he felt he was not being completely clear and urged me to follow up with him to get more data. After reviewing the interview, I decided not to do so because his perspective seemed clear and it might not have been fair to other interviewees' perspectives.

I offered all participants confidentiality in that nothing they said would be connected directly to them. In

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<sup>1</sup>All interview questions used in this case study are listed in Appendix 1.



places where employees are quoted by their role, I obtained their permission. Epistemologically, systems thinking recognizes that a researcher is not completely independent of the object researched--they are both parts of a greater whole. Given this, I have used the first person throughout this thesis. I also recognize that opinions expressed and information divulged can have an effect on the organization. As this is a currently operating agency, it is important to respect the privacy of the employees and not to interfere in personnel matters. The name of the agency is omitted in this case study and any names used have been changed.

### CHAPTER III

#### CASE NARRATIVE

The agency described in this case study is a mosquito abatement district located in the San Francisco Bay Area. It was established about sixty years ago when the citizens of the county it serves petitioned their Board of Supervisors to create it. It is charged with controlling the mosquito population in the county to enhance the greater health and enjoyment of the taxpayers. The District is governed by a thirteen member Board of Trustees which meets monthly. Members of the Board are appointed as citizen-volunteers for two-year terms, one per participant city and one from the county-at-large.

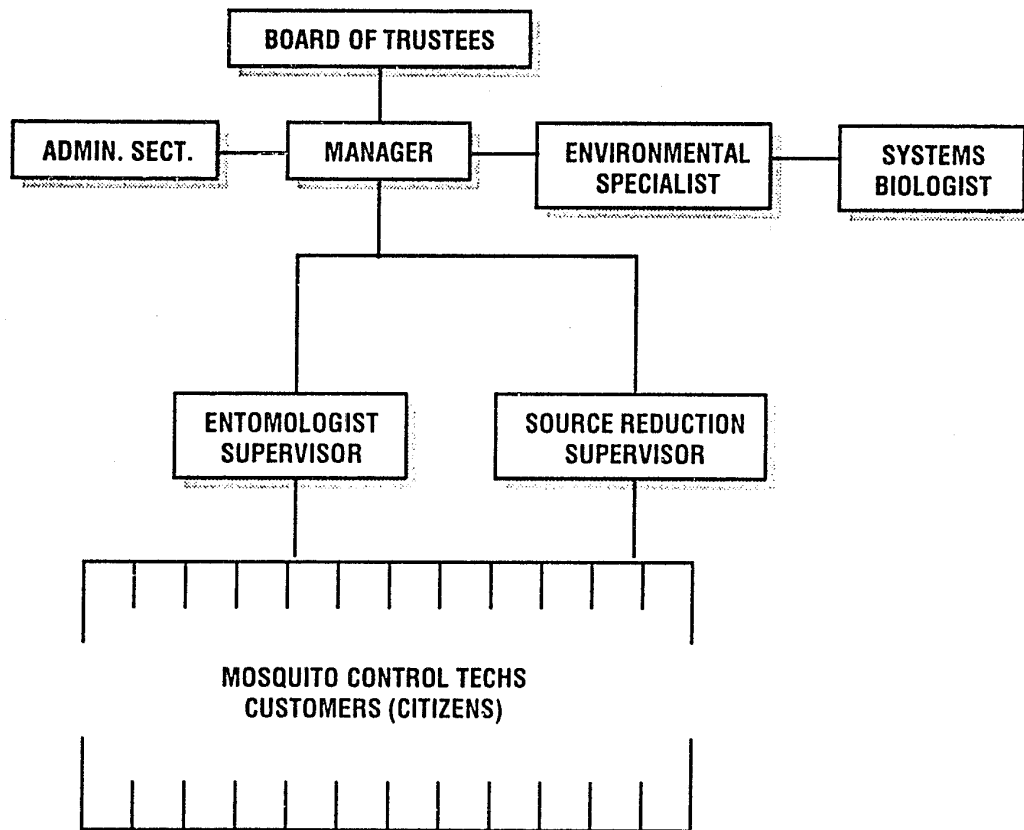
The District is presently located in a single facility with offices, a board room, garage, and shop areas in one of the participant cities. The facilities were built for the district in 1984; the three, separately located, older facilities which the District had used were either sold or the lease was discontinued.

The Board of Directors hires the District Manager, who is their direct interface with the District. The present

District Manager has worked for the District for twenty-two years, twenty of them as Manager. He has a B.A. degree in Zoology, an M.A. degree in Biological Sciences with an emphasis in Entomology (the study of insects), and an M.S. degree in Cybernetic Systems. Until two years ago the District was run in a fairly traditional hierarchical manner (see Figure 1, an organization chart provided by the District and copied with its permission). The District Manager and the Administrative Secretary (also called the Secretary/Bookkeeper in the biennial reports) made up the Administration area.

In the Operations area, two supervisors reported to the District Manager. The Entomologist/Supervisor was responsible for performing identification of mosquito species, trapping flying mosquitoes to know when and where they are breeding, serving as a source of entomological knowledge for the Technicians, performing quality control checks on the Technicians' work, and coordinating some of the Technicians' activities (such as approving vacation requests). The Source Reduction Supervisor was responsible for working with outside agencies to reduce the number and prevent the creation of mosquito breeding grounds as well as maintaining the shop, equipment, and facilities.

The Manager created two more positions as he shifted



**FIGURE 1**  
**XXXXXX COUNTY**  
**MOSQUITO ABATEMENT DISTRICT**  
**(1990-1993)**

some of his responsibilities down the hierarchy. The Systems Biologist was responsible for writing and running computer programs which simulated mosquito life cycles and for helping make the abatement efforts more effective. He also served as a District-wide resource in using computers. The Environmental Specialist was responsible for representing the District to many outside entities, such as environmental and insurance agencies, the public, and the press.

The Mosquito Control Technicians performed the front-line abatement activities: inspecting potential mosquito breeding grounds and treating them when required. This position demands a unique mix of manual skills (such as spraying, driving heavy equipment, and ditch digging) and intellectual skills (such as expertise in entomology and logistics).

Most of the Operations staff have at least a bachelor's degree in a life science, usually entomology, while two have master's degrees. Those who do not have college degrees have high school diplomas and over twenty years of field experience. All of the Operations staff have taken many hours of specialized training and C.E.U. classes.

Most of the District's personnel have worked for the District for a substantial amount of time: five of the

twelve employees have over twenty years of service, while two more have over twelve. An employee who retired in April of 1993 had been with the District for forty-three years. As one long-time Technician explained, "Generally here once you're hired on you either retire or die."

The county is divided by the District into ten zones. Each of the Technicians has one or two zones; some of the support staff also have a zone, although these zones are light duty. It takes a Technician about three years to really get to know a zone. Each zone will have different characteristics: some are easier to inspect and control than others; some become active during summer, others during winter. Three of them are marsh zones, which can be "sources" of major problem species of mosquitoes like *Aedes squamiger* (Winter salt marsh mosquito) and *Aedes dorsalis* (Salt marsh mosquito).

A source is a body of water on land which allows mosquitoes to breed their larvae. It can take many different forms like underground storm drains, irrigated pastures, and treeholes. There are nineteen varieties of mosquitoes found throughout the county, each depending on distinct sources. The Technicians control mosquitoes at their sources through three means: chemical, physical, and biological. A chemical means involves application of

pesticides which selectively kill mosquito larvae. Physical means involve the elimination of sources through building or repairing levees and digging ditches. If the sources remain, they may employ the biological means--which involves planting mosquito-eating fish, *Gambusia affinis*, which feed on the larvae.

The primary measure of the success or failure of District programs is feedback from its customers, the citizens of the county. If a citizen calls the District with a report of biting adult mosquitoes, it is recorded as a Service Request (SR). Although the District does not try to kill adult mosquitoes that are already flying, it can inspect and treat sources. Its biennial report for 1982-1984 emphasizes that it attempts cost-effective, environmentally sound, long-term control:

By directing its efforts toward the larval sites, the District has reduced high costs associated with repetitive, area-wide, chemical control of adult mosquitoes and have greatly reduced the potential for environmental disruptions caused by the control effort.

Besides the comfort of the public, the District's abatement efforts are directed toward the control of mosquito-borne diseases. *Aedes sierrensis* (Tree hole mosquito) carries the vector for canine heartworm, *Dirofilaria immitis*, a parasite that lives in the hearts of dogs and feeds on their blood. *Culex tarsalis* (Encephalitis

mosquito) and *Anopheles freeborni* (Western malaria mosquito), vectors of mosquito-borne encephalitis and malaria respectively, are also present in the county.

These diseases are unlikely to be transmitted because the ambient temperatures are relatively low and the populations are controlled. However, in July 1993 the District Manager reported to the District employees at a staff meeting which I attended that

There are high levels of Western Equine Encephalitis activity going on in the Central Valley now...This is probably the greatest amount of activity that's occurred since I've been involved in vector control...I don't doubt that there's going to be human cases and it's probably going to be detected within the next few weeks.

In interviews, the employees of the District appeared to be dedicated to doing their job for their customers and the District's mission. At a time of extraordinary cynicism about government, I found this tendency noteworthy.

One tool which the District has for monitoring mosquito sources is a computer simulation program called ZING. It was created by the Manager with the help of other employees. This systems simulation tracks the sources in the county and uses data on the species present, rainfall, and temperature to determine an inspection schedule and when sources should be treated. The Technicians fill out daily cards with key information (source, species, and inspection



data) and hand them into the Systems Biologist. After the data is entered, the ZING program generates a report for each zone detailing which species to expect at what stages in which sources.

Until two years ago, most major decisions (such as program design, configuration of equipment, and hiring) were made by the Manager or the Supervisors. Input was sometimes sought from the Operations staff, but many times decisions were typically made without it. The Manager reported that an employee later told him that when the Manager presented ideas to the group and gave them a choice, they usually could tell which one the Manager wanted and picked it by default.

The District currently faces several major challenges: First, an increasing environmental awareness among the United States public is limiting the chemical tools which the District can use. Second, changing demographics in the county have more citizens moving closer to mosquito sources. This restricts District employees' access to the sources and the chemicals they can use. It also increases the chances of receiving service requests. Third, the District can be "victims of its own success"--its effective control of mosquitoes takes them out of the public awareness, which can reduce the will to financially sustain the effort. In fact,

while I was preparing this case study, several people I discussed it with expressed surprise that mosquito control was necessary and that agencies exist to perform it.

Fourth, the 1993-1994 California state budget cut \$387,000 of the District's normal state funding. The county was able to make up the difference, but may not be able to in the future. Fifth, the District Manager reported in the July 1993 meeting which I attended that next year's budget had been sequestered pending a review. The trend toward "reinventing government" (much of it triggered by David Osborne and Ted Gaebler's bestseller, *Reinventing Government*) had characterized special districts as inefficient and not responsive to the citizen-customer.<sup>1</sup>

The greatest internal challenge to the District probably centered on organizational issues, as reported by the employees themselves. The Technicians tended to mostly stick to their own zones and not be involved in anything outside of them. The Entomologist/Supervisor, who was responsible for coordinating the Technicians' activities, often felt bypassed since the employees would deal with the Manager directly. There was an anti-management bias among

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<sup>1</sup>David Osborne and Ted Gaebler, *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector* (New York: Plume, 1992).

the staff. Some employees would not talk to each other, and yet many did not know why because these were undiscussable issues. This led to low morale and tension. Teamwork was not very common and usually occurred among those who "hung out" together rather than to serve District needs. In addition, the Entomologist/Supervisor felt that he was often fighting coalitions.

Coalitions are usually a group of individuals who have a hidden agenda which they try to enact. Seeing something that they believe needs to be done, they go about attempting to do it in a secret manner. Although there is most often an anti-managerial component to coalitions, groups of managers can create coalitions against their supervisees if they are keeping something secret from them. Ordinarily, managers have no need to create coalitions because they make the rules.

The District Manager saw these problems and noticed that the solutions management applied often made the problems worse. Employees were susceptible to personal problems brought on by work (such as burnout, work/family imbalances, and being present in body but not mind). He read *The Fifth Discipline* while getting his M.S. degree in Cybernetic Systems and came to the conclusion that reformulating the District as a learning organization might

improve the situation. Thus he proposed to the District employees that they attempt to create a learning organization and move from a Model I to a Model II organization.

After the proposal was accepted, the District took several steps to begin the process. Members of the District studied chapters in Senge's book and made presentations to the group on them. To study principle-centered work habits, several employees also read Stephen Covey's *The Seven Habits of Highly Effective People*.<sup>2</sup> The District jointly wrote the following shared vision (copied with permission).

A SHARED VISION  
Group Memory - January 15, 1992

We the MEMBERS OF THE ----- COUNTY MOSQUITO ABATEMENT DISTRICT, in order to create an organization that is more responsible to both members of the organization and the public, HEREBY ENDEAVOR TO:

1. Meet the public need for MOSQUITO CONTROL by providing for their HEALTH, SAFETY, COMFORT, AND KNOWLEDGE in an environmentally sound manner.
2. To plan for the future by ENHANCING OUR LEVEL OF ENVIRONMENTAL CONSCIOUSNESS through continual self-education, research and development of new effective control methods, and by communicating and interacting effectively

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<sup>2</sup>Stephen R. Covey, *The Seven Habits of Highly Effective People: Restoring the Character Ethic* (New York: Fireside, 1989).

with other agencies.

3. CREATE A POSITIVE ATMOSPHERE through a courteous, trusting, respectful, cooperative and open-minded working environment.

4. Become a resourceful, reliable, effective, and efficient district by taking responsibility for MAINTAINING AND SHARING SKILLS.

5. FOSTER PERSONAL AND DISTRICT GROWTH AND SUCCESS by developing and improving necessary skills.

Finally, in all activities that we do, the SAFETY OF THE PUBLIC, OURSELVES, AND THE ENVIRONMENT is of paramount concern.

To assist in the process of becoming a learning organization, a consultant was engaged in July 1992. The Lead Consultant, as he will be designated for this case study, had an extensive background in helping organizations with organizational strategy, program design, and integrative approaches to complex social issues. As a professor at a nearby university, he had authored and edited several books and many articles on these topics. Prior to being engaged by the District, he had completed projects with over fifty consulting clients.

The Lead Consultant works in what he calls a "facilitative consulting" mode. It is facilitative, in that he meets with groups and begins a questioning process. Rather than talking to a few people individually and making recommendations, he explained that he is constantly

encouraging and soliciting formal and informal feedback from the group. The process must be interactive and collaborative from the beginning. It is consultative, however, in that he does not hesitate to interject some substantive or process suggestions from his area of expertise at critical moments.

The Lead Consultant's initial focus was to help the District develop a biorational program for their winter marsh campaign. The county's three marsh zones are especially active in the winter as sources for *Aedes squamiger* and *Aedes dorsalis*. These species account for a large number of their winter service requests. As one Technician said about *Aedes squamiger*,

With that species, they're going to fly, they're going to fly far, they're going to bite in broad daylight--out in the sun--really aggressive, and you're going to see ramifications from them for like months on end and there's not a whole lot you can do about them once they're out.

A biorational program is one which makes use of two "soft" pesticides, Altosid and BTI. These are selective against mosquito larvae, unlike "hard" organophosphate insecticides used in the past which could harm wildlife. While the hard insecticides could simply be applied once, to non-selectively kill any living organisms present, increasing public awareness of environmental matters

precluded their use. The disadvantage of using soft biorational pesticides is that timing is vital in their application. They have to be applied at the appropriate time in the larvae's lifecycle to be effective. This means Technicians must make pre-treatment inspections, apply the pesticide at the correct time, and often make more than one post-treatment inspection to verify their success.

At the time the Lead Consultant and the District were planning the winter program, California had experienced six years of drought. For several years there had been fewer mosquitoes because less rainfall created fewer sources. However, rainfall during the winter before had been much greater than the thirty-year seasonal average. As a result, the District had received many more service requests than in previous years. The District Manager realized that their existing biorational programs were no longer as effective as they used to be: "We were having trouble doing it. People were not learning how to use the biorational approaches effectively."

According to the Lead Consultant, opening discussions with the District Manager about possible approaches to biorational planning tended to emphasize a technical solution that would likely involve having the group revise the ZING simulation. Rather than assuming a particular

solution, however, the Lead Consultant proceeded by facilitating a questioning process. He asked District members to give him a "rich picture" of what their context was. A "stakeholder analysis" was performed by asking questions like "Who do you have to satisfy?", "What's the situation you are in?", and "What's it like killing mosquitoes versus a couple of years ago?" This very divergent thinking helped open the group up to working together and acting in a more collaborative fashion.

Next, the Lead Consultant moved them to a more structured form of divergent thinking by breaking them into three groups of four and asking them to develop a proposed program. These groups each developed a distinct program through several group meetings over a month-long period and presented it at a District-wide consultation meeting. The District took the best parts from the three different programs which the groups had created and developed a synthesis that became the biorational program for the 1992-1993 season. The District Manager noted that in the past their decision-making process did not consciously include a divergent-thinking phase and those skilled at divergent thinking were not respected for it:

There were so many people that were decision-and implement-oriented that those people that were divergent thinkers were looked on as "just not willing to get in and solve these problems and get them done!"



The plan that was adopted reflected a much greater commitment to teamwork and communication than members of the District had demonstrated before. They created three-person marsh teams for each of the marsh zones; established a procedure on how to ask for help when it is needed; and set up an operations board in the District lobby which showed where each member and each team were each day and what equipment they intended to use. All of these innovations provided greater coordination and allowed scheduling conflicts over the limited equipment to be surfaced and negotiated immediately. The District also built evaluation criteria into the program based on whether it would be a dry winter, medium wet winter, or very wet winter.

In addition, they decided that they needed to meet once a week as an entire district. This itself was a significant step because they had previously not had regular meetings and many of the staff often complained that they "don't like meetings." The Thursday morning staff meetings started in November 1992 and roughly follow the format outlined in the book *How to Make Meetings Work*.<sup>3</sup> There is a facilitator who runs the meeting and begins by calling on each member for an individual report on what is happening in

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<sup>3</sup>Michael Doyle and David Straus, *How to Make Meetings Work* (New York: Jove, 1976).

their zone or area of concern. A recorder stands at the blackboard writing notes on each employee's report and records business for the agenda of the next meeting. A typed record is made of these notes (called the "Group Memory") and distributed to all the employees as well as being archived by the Secretary. The positions of the facilitator and recorder are rotated weekly among the District members.

The results have been quite impressive. In the 1991-1992 winter season, the District had treated 1766 acres for *A. squamiger* and *A. dorsalis* and had handled 224 service requests attributable to them. During the 1992-1993 winter season they treated 3861 acres under the new biorational program and handled 31 service requests, even though there had been two more inches of rain. To put this in an even broader perspective, the District Manager reported that another Bay Area mosquito abatement district with comparable conditions showed no significant change in its service requests for January to June during the two seasons (1238 vs. 1142). Five of the ten employees interviewed mentioned the winter marsh program without prompting as an example of when the District had worked as a high performance team. One Technician noted about the program:

What we did last spring--I mean where we had twice the rainfall and half of the tools and did better than ever.

That's what I see. And I saw everybody getting along together and communicating in spite of the fact that we were, you know, still beginning with this stuff.

A sixth employee said that he saw it as a stepping-stone to restructuring how they do things in general.

Prior to this winter marsh program, the Manager and Supervisors had always designed programs and then directed the employees. An employee said that having an outside facilitator empowered the rest of the District members to make decisions as a group. Because management at the District had a stigma, the person who led them in the program design process had to be external. The District Manager reported that as the employees became more empowered, management lost control in the meetings with the Lead Facilitator. The Manager felt this slipping away quite literally as a pain in his stomach and he talked openly in the meetings about it as his "control pain."

Interestingly, the ZING computer simulation was never touched during the design process. The Lead Consultant remarked about this:

It turned out that eighty to ninety percent of what people wanted to address that they thought were critical were in fact organizational issues, and not technical issues. So how were things going to be improved? They were going to be improved by having more explicit teamwork and having everybody be involved and ready to help when needed--not by refining the ZING program.

The next stage in the process of attempting to become

a learning organization was to engage a second consultant, designated here as the Special Consultant. There was a need to deal in more detail with mental models and Model I vs. Model II behavior at the District. The Special Consultant had a background in working with organizational mental models and had already completed projects with six other clients. In addition, he had published two articles on systems practice and had been notified that a chapter on team learning that he had written would be published in Peter Senge's next book. The District Manager and Lead Consultant asked the Special Consultant to present a proposal for an action-science-based intervention with mental models. The Special Consultant used a three-stage process which was a close approximation of the template in Part 3 of *Action Science* by Argyris, Putnam, and Smith.<sup>4</sup> The intervention began with a two-day theoretical seminar which grounded the participants in Model II ideas and behavior. They then began the actual work.

The first stage is called "unfreezing." The Special Consultant tried to help the District members understand how incongruent some of their behavior is with their vision or

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<sup>4</sup>Chris Argyris, Robert Putnam, and Diana McLain Smith, *Action Science: Concepts, Methods, and Skills for Research and Intervention* (San Francisco: Jossey-Bass, 1985), 267-449.

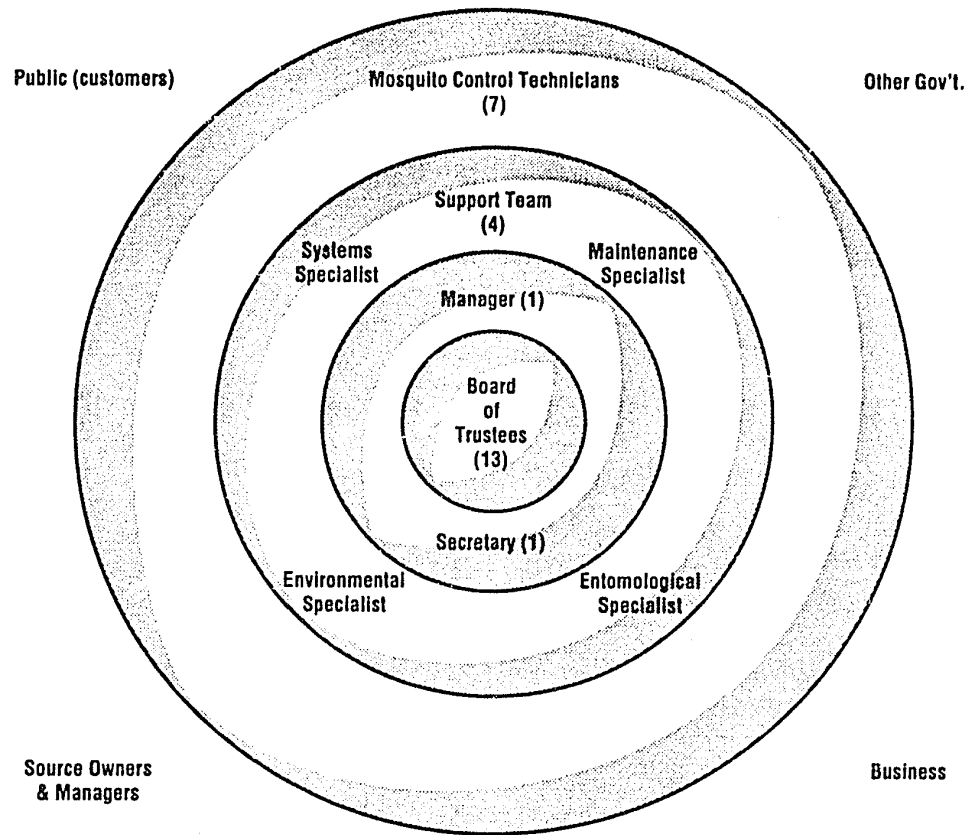
intentions. The difference between individual and organizational espoused theories and theories-in-use can become painfully obvious.

The second stage, called "mapping the Organizational Defensive Pattern," involved District members bringing up cases which allowed the group to map many of the disfunctional routines in the organization. This helped them understand the causal structures for the routines and develop skills to move beyond them.

In the third stage, called "internalization of new skills," which had not been completed at the time of the interview, they had been working on developing cases where employees would describe an interaction with another employee which had not gone as they intended. They would use Argyris's "left hand column" technique by dividing a piece of paper in half lengthwise and writing the actual dialogue on the right side and what the participants were thinking and feeling on the left. This technique makes both mental models and Model I behavior explicit. With the group acting as a consultant, it allowed everyone to move toward Model II behavior through practice.

The next learning organization project began when the Source Reduction Supervisor retired. In addition, the Entomologist/Supervisor announced his plans to retire during

the summer of 1994. These created openings at the supervisory level which would have normally been filled through promotion. Because of these changes, the District will also hire at least one more Technician in the near future. District members decided to re-examine the District's hiring process, both internal and external. The Lead Consultant emphasized, "These are major personnel issues...For a learning organization, this is where the rubber meets the road because when it affects position and pay, it's big stuff." As a result of this process, District members ended up restructuring the entire District. They began by reconsidering all roles in terms of the current needs of the District. Each need and responsibility was assigned to a role based on a consensus decision. The new organizational chart (Figure 2, which was provided by the District and copied with its permission) is a set of concentric circles: the Board of Trustees, Manager, and Secretary all in the center; the support team (Entomological, Systems, Maintenance, and Environmental Specialists) surrounds them; and the Mosquito Control Technicians are on the outside directly interacting with the natural (sources, etc.) and social environment (customers and other stakeholders). Most supervisory responsibilities, except those exercised by the District Manager in accordance



**FIGURE 2**  
**XXXXXX COUNTY**  
**MOSQUITO ABATEMENT DISTRICT**  
**(1993)**

with his formal accountability for all District affairs, were changed into leadership responsibilities and vested in all District employees. Now major technical, policy, and coordinating decisions are made at the District-wide Thursday morning meetings by the entire group.

This restructuring left five positions, that of district manager and the four support team members, to be filled. Any employee could apply for any of the positions and all, including incumbents like the Manager and the Environmental Specialist, had to interview for them with the group. Non-applicants then privately evaluated the candidates in four categories: (1) technical knowledge; (2) contribution to the learning organization; (3) projected technical learning; and (4) projected contribution to the learning organization.

Four employees each applied for the Entomological and Maintenance Specialist positions; the former Systems Biologist was selected for the Entomological Specialist and a Technician became the Maintenance Specialist. Two each applied for the Systems and Environmental Specialist positions; a Technician was selected for the Systems position and the incumbent remained the Environmental Specialist. Only the District Manager applied for the manager position, so after interviewing he remained in it.



The new positions went into effect in July 1993. There are plans to do a performance evaluation in six months, and after a year the support staff employees may be rehired into their positions for another year. One of the support team pointed out that evaluation actually happens every week: "I think our Thursday meeting is a form of evaluation in a lot of ways. People are going to tell you, 'Hey, we need this!' or 'How come we haven't got this?'" In a Model I organization, substandard performance would be an undiscussable; this can be avoided in the Model II organization they are creating.

The next personnel task was to hire a new Technician. The District discussed what sort of person they wanted and decided that a major characteristic is the ability to contribute to others' learning. A hiring committee of two Technicians and a member of the support team was formed. The committee members were inexperienced about personnel matters, so the Manager or Entomologist/Supervisor advised them to be sure that legal requirements were met.

The consultants and the District Manager described the consulting process used as a pulling and pushing one. By helping to create a new structure, the Lead Consultant was "pulling" the group toward a learning organization. However, in order for the restructure to be successful,

their behavior needed to fit into the new template. The complementary process which the Special Consultant facilitated by helping them change their behavior was "pushing."

In a previous career, the Special Consultant told of configuring computer systems and finding that the client never adopted the supposedly "optimal" solution sold to them. Something always seems to hold them back from using the full potential. He called this the "hidden constraint." In Argyris's work he found that the hidden constraint was the Model I organization meta-mental model. Organizational change has a greater chance of being effective if it involves changing both structure and behavior.

Despite the progress the agency has made towards becoming a learning organization, there are some burning issues on the negative side. One is coalitions, which are still an extremely controversial subject at the District. Even their definition is somewhat unclear. Some defined a coalition as a group with a hidden agenda, others as simply a group of people who like to hang out together--a network or clique. Historically, the supervisors had fought coalitions. The District members had a meeting with the Special Consultant which was dedicated to the topic and where those who belonged to coalitions were "identified."

Others feel that too much has been made of the coalition issue. One employee said, "I got where I hated the word 'coalition' because it made it sound like it was a bad, undermining thing that was going on." Another compared the search for coalitions to persecution: "Right now I think we are in the stage of suspicion. Like the Nazi party. See any two people talking in the corner it's like 'They're dangerous to the organization!'" Yet another believes that a four-member coalition colluded to influence the voting for the recent restructure. The person who identifies himself as the greatest proponent of the negative coalition theory now believes that they are neutralized due to the flattened structure: "They're part of the group setting the rules. They'd just be fighting their own rules, they wouldn't be fighting management/supervision."

One "coalition" identified is nicknamed the "Shop Dogs," which consists of four employees who like to work together in the shop. The perceptions about them demonstrate the complexity of the issue. After the Source Reduction Supervisor retired, the Shop Dogs took over configuring the equipment on the trucks. Some employees felt that this was owning and controlling behavior on the Shop Dogs' part because the others did not get an opportunity to participate. On the other hand, the Shop

Dogs felt that the shop work needed to be done and they did it--those who were not inclined to go out to the shop let them.

One Shop Dog, in commenting about espoused theories versus theories-in-use said:

Espoused theory here is that "Shop work is important." And the theory-in-use is that "The shop work is important as long as certain members of the staff do it so that other certain members of the staff don't have to do it." And that's a major problem right now.

Another Shop Dog noted that the sessions with the Special Consultant have helped him understand others' viewpoints:

There was probably four or five of us, we could rely on one another all the time, and there wasn't cooperation from other people. But being we've been able to sit down and talk the undiscussables, I think we've been able to find out more about people and why they haven't participated or helped or volunteered. Myself, I understand better why they didn't...I would say it is better now than what it was.

Another issue is the practice of distinctly different conversations going on inside and outside of meetings. The District members have nicknamed this "water cooler talk." Some employees noted that the amount of it has significantly decreased. While the Lead Consultant was working with the group, he would occasionally ask them for a water cooler index: how different were the conversations at the break from the ones in the meeting? The employees reported to him that the gap was gradually narrowing and that break

conversations were simply continuations of the meeting ideas. However, in a group meeting which I attended, an employee brought up an issue. Some in the meeting indicated that it was not something he needed to be concerned about. He reported that after the meeting he spoke with two other employees who said, "I know what you are talking about. I'm glad you brought it up." This indicates that water cooler talk is still going on to some degree.

Most employees support the changes brought about during the District's effort to become a learning organization and feel they have been positive. Typical comments were:

- "It's a drastic shift in how things are done. Everyone has worked hard at it."
- "We have a long ways to go yet...I like the direction we are going."
- A person who had recently considered a career change said: "I think I would have been gone by now, I think, if all this hadn't happened."
- The Entomologist/Supervisor reported having to do less Quality Control activities and having to deal with fewer repeat service requests. He has shifted much of the Quality Control to the Technicians themselves. He attributed this to the learning organization practices.

However, one employee believes that the learning

organization activities are not benefitting the District to the extent they could be. "We're attempting to function as a learning organization and be team-oriented and serve the public. And we do that, but we don't do it to a *fraction* of our potential." When asked what more the District could be doing, he responded,

We're doing it...it's not going as far as I think it could or should. Inside-the-District communication--we don't communicate with each other. We talk at each other but not with each other and we don't listen.

Asked if he sees that changing in the future, he said,

Not right away, no. These people aren't comfortable about *really* getting into undiscussables; it starts to get uncomfortable, it gets put off...Then they go out in their little sub-groups mumbling their version of it. So no, I don't see that happening anytime soon.

He also points out that they did not adhere to the process that they agreed to in the hiring procedure for the recent restructuring.

Essentially you'd have the information submitted, you'd have the interviews, you'd have the scores tallied, all the information would be posted on the board, there would be a discussion, and then the group after the discussion would make a blind vote. Well, the scores did not mean that the person actually got the job. It was a tool. We didn't do that. As soon as the scores were posted, that person got the job, there was no discussion and on we went.

His conclusion was that they had opted to work with whomever they felt comfortable with. He confronted his co-workers about this by creating several systems maps of how

he viewed the problem. The three major areas were (1) the comfort factor (selecting people because of feeling comfortable working with them); (2) the lack of communication; and (3) not adhering to the selection process that they had agreed to. He stated that in order for an individual to test attributions, "you got to hang yourself out on the line to dry and be willing to take what comes. Now the group's got to be ready to take what comes back. And that dynamic we don't have."

Despite these issues, the Lead Consultant believes the learning organization activities are going very well:

It's been a real successful year. And I think a large part of that is because they were so prepped, so primed in the sense that [the District Manager] had been talking for a year and having them read about learning organizations and organizational defensive routines...So my assessment from it is it has been very, very successful. I have been able to have a richer conversation at both a practical and a conceptual level than with any other client I have dealt with...There is a level of sophistication I have been real surprised by at [the District].

When asked about the contention that members of the District don't communicate and get into undiscussables, the Lead Consultant responded:

I would tend to disagree with that and it may again be that I am not as sensitive to those undiscussables. I know there are undiscussables but, compared to many other organizations that I have dealt with, there's nowhere near the same number of undiscussables, as evidenced by there's not as many put-downs and obvious behaviors, as evidenced by the level of candor that most

people discuss.

According to the Lead Consultant, the District's ability to be a high performance team is growing:

I think there's been an awful lot of team learning and as they develop more sophisticated skills in teamwork, they're going to improve their ability to be a high performance team. One of the things I think is crucial for a high-performance team is that it be a learning team. In other words, you can have high performance in a narrow sense, that is on this particular task or this particular setting or situation, you can perform at the highest level, but that situation is not going to be duplicated.

The Special Consultant also feels that the intervention has gone well:

I see more progress than I would have expected. An awful lot more commitment of individuals to understand their own complicity and disfunctional situations that may occur. That's wildly gratifying to see that happen because in a normal organizational change program none of that has to happen--people are safe from ever looking in those closets.

He also noted that the District was distinct in comparison to other organizations:

This is an unusual one, even looking at the literature; these guys are much different than any of the groups that I've worked with or that I've read about in the literature. There are two things that people need to get through this process and not walk away shaking their heads...You have to have the ability to hang in there when it's tough and you don't think you're ever going to be able to do anything right. And two, to be open to feedback from other people no matter how elegantly or inelegantly--that is, Model II or Model I--that feedback is delivered.

When asked if the District was a high performance



team, the Special Consultant commented,

Is the District a high performance learning team? I think they're a higher performance team than most, if not all, of the entities I have run into that consider themselves on the road to being a high performance team...I think they still appear to be struggling with empowerment and a high performance team has empowered participants...I don't think they have achieved what they would consider their vision for a high-performance team.

He added:

A high performance team...is consistent with what they wanted for themselves and were willing to commit to undertaking. They have shown that commitment throughout my experience with them and I have been astonished by the courage that I've seen some individuals exhibit in making themselves vulnerable in order to become better at becoming a participant in a learning organization.

In the future, the Lead Consultant will be training members of the District on how to work effectively *without* a consultant: how to better facilitate meetings, how to solicit formal and informal feedback, how to incorporate divergent and convergent activities, and how to build team assessments into activities to decide if they are working well as a team. This will help ensure that the District can replicate successes like the winter marsh program and be a significant step in double-loop learning--the practice of "learning how to learn."

The perspectives presented here are varied; some are even contradictory. The combination of the multiple perspectives is necessary to grasp the nature of the changes

going on at the District. One viewpoint cannot be assumed to be the "absolute correct one." As one long-time District employee who characterized himself as "not academically-oriented" said when asked, "What is reality?,"

It's what I see, but not everything I see is what's there. I don't know if you can define what is reality. We all think we know what reality is but we don't all see the same thing.

#### CHAPTER IV

#### ANALYSIS AND DISCUSSION

Based on what I have seen and heard, the District has made significant strides to becoming a learning organization. In comparing the accounts of how the District used to be and how it is now, it is evident that Senge's five disciplines are at work. This is not a process that has a defined endpoint, but indications are that the District will continue to build on its momentum.

Shared vision guides the organization. All were aware of the vision and seven of the ten employees interviewed were able to recount three major elements of the vision without any prompting: (1) service to the public; (2) refining and upgrading their skills; and (3) achieving these through a learning organization. Nine of the ten said that they felt that the District's actual activities were mostly in agreement with the stated vision. Throughout the interviews, a constant theme was their dedication to the District's task of controlling mosquitoes.

Personal mastery is encouraged at the District through continual education and establishing criteria for promotion that emphasize how much the employee will learn. Most of

the employees were thoughtful during the interviews, not simply giving "canned" responses. Some of them expressed personal visions which were congruent with the District's shared vision, like "Feeling that I have a purpose of some sort, feeling useful...being able to use the skills that I have in a way that is satisfying." Another said, "Constantly learning and adapting to new situations." The District Manager's personal vision was:

To transform the workplace to a democratic place where people want to come to work, where people want to be productive, where they can be productive and where when they're doing that, it reinforces them positively and they feel good about themselves. I would like to support that kind of workplace here and ultimately I would like to be able to take that work out of here as a life-goal.

Many of the interviewees spoke of their much greater teamwork and pointed to the evidence of the successful winter marsh program. The Lead Consultant says that there has been team learning going on at least at two levels. At the zone team level, where the marsh teams are able to work together to solve technical/biorational and interpersonal problems, employees are more willing to ask each other questions and seek help. At the District level, everyone now meets together to address issues like scheduling equipment, restructuring the organization and redesigning the personnel process.

The members of the District are working with their

mental models, attempting to surface and test them. Their work with the Special Consultant involved using mapping and Argyris's technique of the left-hand column. The Systems Specialist has the responsibility of updating the ZING computer simulation, which serves as a District-held mental model of sources in the county. Some of the employees are attempting to act in a Model II fashion, while others do not want to change but realize the new roles are inevitable. According to the consultants, undiscussables are being surfaced at a much faster rate than in other organizations they have worked with which were attempting to be Model II.

Systems thinking is now a mainstay of the organization. In the past, employees would only concern themselves with their zones or area of specialty so only the District Manager and Entomologist/Supervisor had a view of the District's "big picture." Now most coordinating activities have been taken from the support team so that everybody is responsible for the District's successful operation. Decisions can be integrated across the perspectives of all twelve employees, who through team learning and mental models are trying to avoid the pitfalls of action by committee. The Manager now shares extensive information with the employees about issues outside the District; before he said he would only do that in a crisis. When problems arise they are able to map out interactions

with systems maps (a la Senge) rather than linear thinking. In fact, the employee who believes that they have made the least progress on being a learning organization used this method of inquiry to intervene with his fellow employees.

Model II-based inquiry carries with it the responsibility to constantly seek disconfirming evidence for one's hypotheses. My conclusion that the District is on the path to becoming a learning organization opens up the opposite conclusion to study: "What evidence is there that the District is **not** becoming a learning organization?" Much of this has already been documented: coalitions, "water cooler talk," the contention of lack of real communication and that promotions were selected based on comfort rather than competence, and lack of adherence to the selection process. However, coalitions (or cliques) and water cooler talk existed before the District began its transformation; they are likely to exist into the future. Some who do the shop work feel that a Technician's role needs to be redefined to acknowledge their contribution, but a process is in place to surface and deal with that issue. Most employees say that communications have improved and the consultants state that it has greatly improved when compared to groups outside the District.

For the selection process, the Lead Consultant pointed out that when he examined the breakdown of scoring by

category, some were ranked highest in technical skill but much lower in contribution to the learning organization--resulting in a lower overall score. It is difficult to render an opinion on whether this is due to a "comfort factor." In my opinion, the only truly valid piece of counter-evidence is the lack of adherence to the decided selection process. Employees can only be empowered if the process they decide on as a group is followed. Even if all members are present when a deviation occurs, this should be surfaced and discussed.

There are some concerns which may affect all groups which attempt to restructure as a learning organization. For example, a possible objection to these activities are that they are "touchy-feely" and "inappropriate for the workplace." In discussing effectiveness, Stephen Covey talks about production and production capacity.<sup>1</sup> Sustained effectiveness requires a commitment to production capacity activities like maintenance and reflection--to learning how to learn. Building a learning organization has required a change in the behavior of the employees. The Lead Consultant stated that employees were not asked to change their attitudes, which would be inappropriate, just

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<sup>1</sup>Stephen R. Covey, *The Seven Habits of Highly Effective People: Restoring the Character Ethic* (New York: Fireside, 1989), 52.

their behaviors. Just as a company which makes slide rules could ask employees to now change their behavior to make calculators, a group which has decided to become a learning organization has the right to ask for behavioral changes by employees. To not consider the long-term production capacity of the organization and continually burn out employees with undue emphasis on product over process would ultimately hinder effectiveness.

A danger of moving toward greater alignment in any organization is groupthink. This is the phenomenon by which highly-cohesive groups become so preoccupied with maintaining a consensus that it affects their ability to think critically.<sup>2</sup> If a group member has doubts about a proposed course of action, he will not voice them because he does not want to break up the unanimity and concurrence. In addition, recent research indicates that groupthink arises as a collective attempt to protect the "group self-esteem" (social identity maintenance).<sup>3</sup> The group will try to ward off threats to its image of itself by making decisions which ultimately prove to be incorrect. As team learning places a

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<sup>2</sup>Irving L. Janis, *Victims of Groupthink* (Boston: Houghlin Mifflin, 1972).

<sup>3</sup>Marlene E. Turner, Anthony R. Pratkanis, Preston Probasco, Craig Leve, "Threat, Cohesion, and Group Effectiveness: Testing a Social Identity Maintenance Perspective on Groupthink," *Journal of Personality and Social Psychology* 63 (November 1992): 781-796.



premium on alignment, these patterns of interaction may arise and cause a false consensus. One District member stated:

I think maybe people who have had a decision kind of go a different way than they were thinking might tend to suggest groupthink because everybody else seemed to go the other way.

However, if the dissenter has not been censored and been allowed to fully express his concerns then I do not believe groupthink is occurring; it is just that no one else agrees with him. By dissenting, the dissenter has broken the consensus and allowed others an opportunity to join him. The Special Consultant does not believe groupthink will occur in a Model II organization which is aligned:

If we've sought to create an organization where surfacing undiscussables is good and we have a way of doing that that doesn't frustrate our attempts to surface the undiscussable, but that enhances our will and collective commitment to doing that, then we're likely to have a good tonic against groupthink becoming a malignant force.

The Lead Consultant believes that some groupthink may exist, but the willingness of certain individuals in the District to uninhibitedly question decisions may neutralize it.

One District member expressed a concern with learning organizations that the group may take too much power. There might be a shift from a "bad boss" scenario to a "bad group"--rather than being bullied by one person, the

participants are bullied by the group. The Lead Consultant sees this as less likely to happen in a learning organization because of access to information:

For somebody to be a bad boss, it's not simply a question of having significant power; but an awful lot of it has to do with that they can use information selectively. In groups, when you have open information...it can't be used as selectively. Therefore, you hold more people accountable. It's real hard to hold a single boss accountable when they can hire and fire you and they have selective access to information and they can write the performance evaluation...There may be some people who don't like certain individuals, but they'd get upset if they saw the group as a whole ganging up on any individual because the next time it could be them.

The Special Consultant believes that in order for bullying to occur, it must remain an undiscussable at the group level. In a Model II organization, bullying by the group is much less likely to occur because the culture would attempt to bring it out in the open.

I have noticed three dimensions to the changes at the District: structural, behavioral, and cultural. Structural changes have definitely taken hold and are undeniable: program design, the team orientation, weekly meetings, promotion process, reporting relationships, and the hiring committee. The District Manager stated that he thought that most of the structural changes for the learning organization at this time had been put in place.

The interviewees reported some behavioral changes beyond the requirements of the new structure, some of which

are quite significant. For example, one employee told of some very recently resolved severe interpersonal problems: "Some of the problems were just like a few months ago--there were a couple of people who wouldn't speak to me." The District Manager pointed out that these behavioral changes do not come without pain:

The thing about Model II behavior is that it surfaces valid information. People design, out of habit, their statements to make them impenetrable. If they're normal human beings in our society, to begin to break that habit, then you have to deal with the issues that caused you to do it in the first place. And the issues are that you want to be right, and that you think you're right, and that you don't want to be questioned. And I thought that what we're all learning here as an organization is that we're all very good at doing that and that means we're going to get hurt inside sometimes when somebody questions us. And that means we have to deal with internal pain.

Cultural changes are the final dimension. They can make the learning organization an enduring legacy independent of any particular set of employees. The Lead Consultant believes that they have already made some. They strongly believe in collaboration, so much so that they have eliminated their middle-management supervision. They also strongly believe in Model II and learning organization behavior, having put them into their personnel evaluation criteria. The Manager notes a distinct cultural change. He plans to retire in one to three years and several employees who initially were very cynical about the transformation have come to him and said, "Okay, now we've got the new

organization. But what's going to happen when you leave?"  
Even the most resistant District members are taking  
ownership of the new learning organization.

## CHAPTER V

### IMPLICATIONS

There are three issues which the District studied needs to deal with, issues that may affect other nascent learning organizations. The first has to do with adherence to agreed procedures. As stated in the previous section, it is vital that the group follow processes which they have designed. This also implies that they should frequently do evaluations to not let a procedure get stale and outdated. They should ask themselves questions of the nature, "Is this really what we want?" and "Does this fit?"

A second implication concerns the presence of dissent in the organization. One member strongly believes that the learning organization activities are having only a negligible effect. Ironically, he could be one of the learning organization's greatest assets. What better way is there for a group to surface and test its mental models than to earnestly listen to a dissenting member? A respect for multiple perspectives demands this.

Finally, the most important issue concerns management. It is impossible to create a learning organization without the support of the direct management. The manager's full

commitment to the process is critical; the brand of lip service which is often given for the latest organizational change program will not work. Because the District Manager intends to retire in one to three years, the District will need to identify a manager who can practice the new work of leading a learning organization. Without a supportive manager, bridging the necessary cultural changes will be difficult. However, with a leader who can act as a designer, steward, and teacher, there is no limit to the District realizing its potential.

APPENDIX 1  
INTERVIEW QUESTIONS

I) District Employees

- 1) May I tape-record this interview?
- 2) What is your name?
- 3) What is your function here at the District?
- 4) How long have you been with the District?
- 5) Could you please give me a brief summary of your educational, training, and work experience?
- 6) Are you aware of the District's official vision?  
Could you tell it to me?  
Do you believe that there is agreement between the official vision and what actually occurs at the District?
- 7) Are you familiar with the concept of personal mastery?  
If yes, where did you learn about it?  
Keeping in mind that you may refuse to answer any question, if you have formulated a personal vision for yourself, would you please describe it to me?  
Do you see any agreement between your personal vision and the District's vision? Why or why not?
- 8) Are you familiar with the concept of mental models?  
If yes, where did you learn about it?  
What was it like to work with mental models at the District?
- 9) Is team learning possible?  
Why or why not?  
Have you seen it occurring at the District?
- 10) Is the District a high-performance team?

Why or why not?

- 11) Please describe the intervention by the Lead Consultant. What was it like?
- 12) Please describe the intervention by the Special Consultant. What was it like?
- 13) How are technical decisions made at the District? What process is used?
- 14) How are policy decisions made at the District? What process is used?
- 15) Have you seen any examples of espoused theories vs. theories-in-use at the District? What are they?
- 16) What was it like to map out defensive routines?
- 17) Do coalitions exist at the District?  
Do you belong to one?  
How do you, personally, define a coalition?
- 18) (If applicable) What was the District like eight-to-ten years ago?  
What do you think it will be like ten years in the future?
- 19) What is reality?

## II) Manager and Consultants

- 1) May I tape-record this interview?
- 2) Could you please give me a brief summary of your educational, training, and work experience?
- 3) Are you aware of the District's official vision?  
Could you tell it to me?  
Do you believe that there is agreement between the official vision and what actually occurs at the District?
- 4) (Consultants only)  
Please describe your intervention:  
How were you brought in?  
How did you proceed?



Why did you decide to work that way?  
How has it been turning out?  
Have you heard any objections that the intervention is "psychoanalysis"? "Inappropriate for the workplace"? "Too personal"?

- 5) Is the District a high performance team?  
Why or why not?
- 6) Have you seen any examples of espoused theories vs. theories-in-use at the District? What are they?
- 7) Do coalitions exist?  
If yes, are they harmful or innocuous?
- 8) Have you seen team learning going on?
- 9) Do you see many defensive routines?  
What are they?
- 10) I will paraphrase the words of one employee and I would like to respond with your perception of the District: "There are lots of undiscussables left. People are not comfortable getting into them. They have just found nice ways of putting each other down."
- 11) Would you please comment on the following issues with regard to how they affect learning organizations in general:
  - a) To be productive, groups need to be aligned. However, if they are too aligned they may fall into groupthink. As learning organizations place a premium on alignment, how do you avoid this?
  - b) How do you reconcile the rights of the individual to those of the group? When you strip out hierarchical management, how do you avoid a shift from a "bad boss" to a "bad group"?
  - c) I have noticed that changes at the District seem to follow along a continuum of structural to behavioral to cultural. How do you see that evolving?
- 12) What do you think the District will look like ten

years in the future?

13) What is reality?

## BIBLIOGRAPHY

- Ackoff, Russell L. *Creating the Corporate Future*. New York: John Wiley & Sons, 1981.
- Argyris, Chris, Robert Putnam, and Diana McLain Smith. *Action Science: Concepts, Methods, and Skills for Research and Intervention*. San Francisco: Jossey-Bass, 1985.
- Argyris, Chris. *Overcoming Organizational Defenses: Facilitating Organizational Learning*. Boston: Allyn and Bacon, 1990.
- Covey, Stephen R. *The Seven Habits of Highly Effective People: Restoring the Character Ethic*. New York: Fireside, 1989.
- Doyle, Michael and David Straus. *How to Make Meetings Work*. New York: Jove, 1976.
- Janis, Irving L. *Victims of Groupthink*. Boston: Houghlin Mifflin, 1972.
- Morgan, Gareth. *Images of Organization*. Newbury Park, Ca.: Sage Publications, 1986.
- Osborne, David and Ted Gaebler. *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. New York: Plume, 1992.
- Senge, Peter M. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday, 1990.
- Turner, Marlene E., Anthony R. Pratkanis, Preston Probasco, Craig Leve. "Threat, Cohesion, and Group Effectiveness: Testing a Social Identity Maintenance Perspective on Groupthink." *Journal of Personality and Social Psychology* 63 (November 1992): 781-796.

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November 5, 1993

Mr. Steve Madden  
1715 Ensanada Drive  
Campbell, CA 95008-1552

Dear Mr. Madden:

Pursuant to your request, I am sending you this letter to document what we had established verbally prior to this study.

I met with the group today and they agreed that you have permission to conduct a study and that in particular you are authorized to publish the organizational charts and shared vision of the District.

Thank you very much for your interest in our organization. Please let me know if there is anything else you need.

Sincerely,

ALAMEDA COUNTY MOSQUITO  
ABATEMENT DISTRICT

  
Fred C. Roberts  
Manager

FCR:vcd